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54 **System for detecting and correcting contextual errors in a text processing system.**

57 A system for automatically proofreading a document for word use validation in a text processing system is provided by coupling a specialized dictionary of sets of homophones and confusable words to sets of di-gram and N-gram conditions whereby proper usage of the words can be statistically determined. A text document is reviewed word-by-word against a dictionary of homophones and confusable words. When a match occurs, the related list of syntactic rules is examined relative to the context of the subject homophone or confusable word. If the syntax in the immediate context of the homophone or confusable word conflicts with the prestored syntax rules, the homophone or confusable word is highlighted on the system display. The system then displays the definition of the highlighted word along with possible intended alternative forms and their respective definitions. The operator can examine the word used and the possible alternatives and make a determination as to whether an error has been made and if a correction of the text is required. If correction is required, the operator may cause the error word to be replaced by the desired word by positioning the display cursor under the desired word and depressing an appropriate key on the system keyboard.

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09012345678901234567890123456789012345678901234567890123456789						
TO: MR JOHN JONES						
IBM NEW YORK						
MR. JONES,						
THE LETTER YOU ARE NOW READING HAS BEEN PROCESSED BY AN AUTOMATIC PROOFREADING FUNCTION. THE INTERNAL DICTIONARY COVERS BUSINESS, LEGAL, AND MEDICAL TERMINOLOGY. AS YOU CAN SEE, IF A WORD IN THE DOCUMENT IS MISUSED, IT IS HIGHLIGHTED ON THE DISPLAY SCREEN. THIS PROVIDES ASSISTANCE TO THE PRINCIPAL OR SECRETARY WHO IS CREATING OR PROOFREADING A DOCUMENT. ALL WORD ENTRIES ARE ALSO CHECKED FOR SPELLING ERRORS AND HYPHENATION POINTS ARE PROVIDED FOR FORMATTING.						
AN EFFECT OF THIS FUNCTION IS THAT THE TIME NECESSARY TO MANUALLY SCAN A DOCUMENT FOR ERRORS IS GREATLY REDUCED.						
AFFECT - ACT UPON OR INFLUENCE EFFECT - RESULT OF ACTION OR TO BRING ABOUT						
I AM CONFIDENT THAT THE SYSTEM WILL BE OF GREAT ASSIS- TANCE TO YOU.						
OF COURSE, NEXT TIME THAT YOU ARE IN THE GAITHERSBURG AREA, PLEASE STOP BY						
SINCERELY YOURS,						
W. ROSENBAUM						



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
A	US-A-4 058 795 (BALM) * Column 1, line 8 - column 2, line 51; claim 1 *	1,6	G 06 F 15/20
A	--- US-A-4 136 395 (KOLPEK et al.) * Abstract; column 1, line 49 - column 2, line 18 *	1,6	
A	--- COMMUNICATIONS OF THE ACM, vol. 23, no. 12, December 1980, pages 676-687, New York, USA J.L. PETERSON: "Computer programs for detecting and correcting spelling errors" * Page 677, column 3, line 11 - page 680, column 1, line 20; page 685, column 2, lines 1-14; figure 2 *	1,6	
A	--- IEEE TRANSACTIONS ON COMMUNICATIONS, vol. COM-30, no. 1, January 1982, pages 105-110, New York, USA N.H. MacDONALD et al.: "The writer's workbench: Computer aids for text analysis" * Page 106, column 1, lines 47-53; figure 1 *	1,6	TECHNICAL FIELDS SEARCHED (Int. Cl. ³) G 06 F G 06 K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24-10-1983	Examiner BARRACO G.S.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	